

Comparisons of Job Characteristics

Focus Occupation: **Mathematical Technicians (15-2091)**

Associated Occupation: **Mathematicians (15-2021)**

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 96

Focus Occupation: Mathematical Technicians (15-2091)

Associated Occupation: Mathematicians (15-2021)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
Mathematics	9.2	25.0	22.0	<< Extensive education and/or training may be required
Computers and Electronics	8.4	17.2	14.4	< Expanded education and/or training may be required
Engineering and Technology	5.7	12.6	7.7	<< Extensive education and/or training may be required
Physics	4.3	11.6	5.0	<< Extensive education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 80

Focus Occupation: Mathematical Technicians (15-2091)

Associated Occupation: Mathematicians (15-2021)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
Mathematics	6.2	23.2	20.5	< A higher skill level may be required
Active Learning	8.7	16.4	14.3	< A higher skill level may be required
Reading Comprehension	10.7	16.3	16.4	0 Current skill level may be sufficient
Critical Thinking	10.8	16.0	18.0	> Skill level is likely sufficient
Complex Problem Solving	9.1	15.1	13.3	< A higher skill level may be required
Science	4.5	13.0	13.0	0 Current skill level may be sufficient
Learning Strategies	7.2	11.5	10.4	< A higher skill level may be required
Programming	2.2	6.2	9.5	>> Skill level is likely more than sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 82			
Focus Occupation: Mathematical Technicians (15-2091) Associated Occupation: Mathematicians (15-2021)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Mathematical Reasoning	6.3	20.6	23.0	>	Current ability level is likely sufficient
Written Comprehension	11.0	16.4	7.6	<<	Extensive improvement in abilities may be required
Deductive Reasoning	10.6	15.7	15.5	0	Current ability level may be sufficient
Number Facility	6.3	15.5	21.8	>>	Current ability level is likely more than sufficient
Originality	7.6	15.0	5.6	<<	Extensive improvement in abilities may be required
Information Ordering	9.9	14.7	7.8	<<	Extensive improvement in abilities may be required
Inductive Reasoning	10.2	14.4	5.9	<<	Extensive improvement in abilities may be required
Fluency of Ideas	7.6	14.3	8.5	<<	Extensive improvement in abilities may be required
Speed of Closure	5.9	9.3	6.7	<<	Extensive improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common		Similarity of Focus Occupation to Associated Occupation: 98
Focus Occupation: Mathematical Technicians (15-2091) Associated Occupation: Mathematicians (15-2021)		
Work Activities	Exclusivity of Activity	
Analyze scientific research data or investigative findings	27	
Collect scientific or technical data	30	
Communicate technical information	4	
Compile numerical or statistical data	38	
Create mathematical or statistical diagrams or charts	43	
Develop or maintain databases	30	
Develop tables depicting data	33	
Explain complex mathematical information	30	
Prepare reports	8	
Resolve engineering or science problems	46	
Use computers to enter, access or retrieve data	3	

Use interpersonal communication techniques	10
Use knowledge of investigation techniques	16
Use mathematical or statistical methods to identify or analyze problems	30
Use oral or written communication techniques	1
Use quantitative research methods	35
Use relational database software	26
Use scientific research methodology	21
Use spreadsheet software	18

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: n/a

Focus Occupation: Mathematical Technicians (15-2091)
Associated Occupation: Mathematicians (15-2021)

Tools and Technologies

Exclusivity

Tools and technology data is unavailable for one or both occupations.

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.